

ÆX GALERICULATA (Linn.).

A common resident. We have not obtained its eggs.

ANAS ZONORHYNCHA Swinhoe.

Also a common resident. Rickett has the skins of two young in down. La Touche took nests and eggs at Swatow ('Ibis,' 1892, p. 491).

PODICIPES PHILIPPENSIS (Steph.).

A common resident. About the end of July Rickett's collector shot two young in down near Foochow. He said that there were three swimming about with the old bird in a large pond.

III.—*On the Birds of the Upper Muonio River.* By S. A.

DAVIES, M.B.O.U., Lieut. East Lancashire Regiment.

IN April, 1904, I made a three months' expedition to the upper waters of the River Muonio, which are locally known as the Kongämä, where I was joined three weeks later by Mr. John Stares.

The Muonio rises in 69° 10' N. lat. and enters the Gulf of Bothnia in 65° 50' N. lat., forming the boundary between Sweden and Finland, but we contented ourselves with working the Kongämä between 69° and 68° 30' N. lat., the latter being the northernmost limit of the pine-forests. I had previously visited the district in 1895, when I was too late for the best of the breeding-season, though I was successful in obtaining eggs of the Jack-Snipe; and in the following year the late Daniel Meinertzhagen spent a season there on my advice, making his headquarters at Muunioniska, which was the centre of operations of John Wolley. The difficulty of getting about at such a season of the year in a country where there are practically no means of communication necessarily confined our operations to a somewhat limited area, and we therefore chose the upper waters, where we thought that we should have the best chance of Ducks, Waders, and mountain-birds, although in so doing we

sacrificed our opportunities of observing the Owls, Woodpeckers, and so forth, which are found in the true forests.

We were greatly handicapped by an exceptionally late season, at least three weeks later than the ordinary. On the 1st of June we were still sledging on the frozen river, which is generally clear by the 10th of May. This cause considerably retarded the arrival of the birds; thus the breeding-season was shorter than usual, the early breeders being late and the late breeders punctual, so that we found it impossible to manage everything in so short a time. For the purposes of observation we established ourselves at two stations: one at Leveavuopio in the north of our district ($69^{\circ} 50'$ N. lat.), and the other at Ainettivaara on the edge of the pine-forests ($69^{\circ} 30'$ N. lat.)

A considerable trade in egg-collecting is still done on the Muonio, and has been going on ever since John Wolley, whose name is to this day revered by the Finns, made Muunioniska his headquarters. The eggs are sent to dealers in Helsingfors, who pay a good price for those of the rarer species; but it is difficult to understand how they find a market, as the specimens are not kept in clutches or identified in any way. I do not think, however, that this collecting has an appreciable effect on the birds as a whole, for the area is so vast and habitations are so scattered that the damage done is infinitesimal, except in the case of certain species, such as the Gyr-Falcon, which is becoming very scarce owing to its frequenting the same breeding-places every year and being annually robbed.

The Finns, as a whole, have a good general knowledge of their birds—the value of the eggs has probably much to do with it,—and, though they do not possess the marauding instinct of the English village-boy, they are keen, so far as it is possible for them to be keen, and throughout the country birds are one of the staple subjects of conversation, which suits the Northern Finn much better than hard work. The natives are excellent at imitating the notes of the various species, the Finnish names of which are often very expressive.

I append some notes on the species observed.

TURDUS MUSICUS. Song-Thrush.

Though we never met with this species, we saw some of its eggs in an old collection at Kaaresuando ($68^{\circ} 25' N.$ lat.), which is probably its northernmost limit on the river.

TURDUS ILIACUS. Redwing.

This bird arrived on the 15th of May. It was very common and generally distributed, preferring the immediate vicinity of the river. We did not find it breeding in company with the Fieldfare, but always singly. The first clutch of eggs was taken on the 5th of June. The song was one of the features of the Lapland summer, and appeared to vary every ten miles or so; the Redwings at Ainettivaara had a totally different song from those at Leveavuopio. We often found their nests built in the rough fences and some on the lowest of stumps. As a rule, they were never more than four feet from the ground. Each clutch contained one egg of a type distinct from the rest, brighter and more richly marked. The usual number was six. The Finnish name of this species is "Night-Thrush."

TURDUS PILARIS. Fieldfare.

The Fieldfare arrived on the 25th of May: on the 26th it was generally distributed in the birch-woods. The colonies were usually some way up the hill-sides, but occasionally we found them breeding on islands in the lakes—a fact which may be due to their preference for the big birches of twenty feet or more, which are not found in the neighbourhood of houses, owing to the ruthless felling of timber which prevails. I only once heard the song, which was uttered on the wing. We found the first clutch of eggs on the 4th of June. The nests of the former year were generally re-occupied, a fresh lining of grass only being added. On the 15th of June we saw some young birds just hatched.

TURDUS TORQUATUS. Ring-Ousel.

Very rare, even in the mountain-districts of the north. We obtained one clutch of eggs on the 26th of June.

SAXICOLA CENANTHE. *Wheatear.*

Very common on the fells, breeding high up on the hillsides above the limit of the dwarf willow, as well as in the valley-bottoms. The nest is invariably lined with the white feathers of the Willow-Grouse. This bird arrived on the 28th of May, and began building on the 5th of June. The Finnish name signifies "Stone-Thrush."

RUTICILLA PHENICURUS. *Redstart.*

Not common; we obtained a few nests round Ainettivaara, where the bird bred in the old Woodpeckers' holes in the birches, lining its nest with the fur of the Arctic Hare and the Lemming and the feathers of the Willow-Grouse.

CYANECULA SUECICA. *Bluethroat.*

Very common throughout the district, in the fir-region as well as in that of the birch. It prefers low-lying moors, where the dwarf willow and the cloudberry form the prevailing vegetation. The nests were invariably well-concealed, either under a stump or in the side of a tussock; but I cannot agree with the late Mr. Wheelwright as to the difficulty of finding them, for we never failed to secure them by beating over likely ground about 9 P.M., at which time the parents appear to cover their eggs. The Finnish name signifies "Hundred-tongues," from the bird's imitative capacities, which are little short of marvellous and often a nuisance to the collector. I heard a newly-arrived example utter a note like that of the Red-wattled Lapwing, with which I am familiar in India. The Bluethroat arrived on the 25th of May, and we found the first clutch of eggs on the 9th of June. There were often seven in a nest.

ACCENTOR MODULARIS. *Hedge-Sparrow.*

I saw a single specimen taking shelter from a snow-storm in a shed at Ainettivaara on the 14th of May.

PHYLLOSCOPUS TROCHILUS. *Willow-Wren.*

Very common in the birch-woods; it lines its nest with the white feathers of the Willow-Grouse, whence comes its

Finnish name of "Willow-Grouse bird." We did not come across Eversmann's Warbler (*P. borealis*), which occurs on the Porsanger Fjord in Norway.

CINCLUS MELANOGASTER. *Black-bellied Dipper.*

This Dipper was very sparingly distributed; its scarceness was probably due to the fact that there were very few suitable nesting-sites for it on the Kougämä. Such places as were suitable were invariably occupied, and the nest, a large domed structure with a neat cup of grass-bents, was placed in an exposed position with no attempt at concealment, so close indeed to the water that in three cases noticed it was washed away by the heavy floods. Once we found an unlined "cock's nest" placed immediately above the nest proper. This species is one of the few that remain all the year round in the neighbourhood, frequenting the rapids, which are open even in the depth of winter.

PARUS SIBIRICUS. *Lapp Tit.*

This species is very sparingly distributed, but is most common in the fir-region. It is resident, but apparently subject to local migrations, as is the case with the Woodpeckers. It is very inconspicuous and silent. The nests were excavated, apparently by the bird itself, in birch-stumps, and were lined with lemming-fur. This was the only species of Tit that we met with.

MOTACILLA ALBA. *White Wagtail.*

Every house had a pair or two of these birds round it, but as there were barely a dozen houses in the whole district they cannot be called common. The nests were usually built in the cow-byres. This species was one of the first to arrive (on the 27th of April), and very miserable the birds looked huddling together for shelter in the old Martins' nests under the eaves in the intense cold which prevailed at the beginning of May. They began nesting on the 24th of May, and the first egg was found on the 5th of June.

BUDYTES VIRIDIS. *Yellow Wagtail.*

Very common throughout the district, breeding in the same localities as the Bluethroat. The nest is very difficult

to find, as it is usually well concealed under a tussock or stump, and the birds are very watchful, leaving long before an intruder approaches. This bird arrived in large numbers on the 26th of May, and we found the first clutch of eggs on the 17th of June.

ANTHUS PRATENSIS. *Meadow-Pipit.*

Fairly common in the lower part of the district; on ascending the river its place is gradually taken by *A. cervinus*, until at the head-waters it is comparatively rare.

ANTHUS CERVINUS. *Red-throated Pipit.*

Very common on the bogs and moors at the head of the river; further down it becomes rare, and we did not meet with it at Ainettivaara. Its distribution is practically the same as that of the Lapp Bunting. The song is very full and varied and contains passages recalling that of a Canary. The eggs often approximate to the Bunting type, whereas the eggs of the Lapp Bunting never approach the true Pipit type. The nests were placed in the sides of tussocks on the cloud-berry bogs. The birds arrived on the 5th of June; we found the first clutch of eggs on the 17th and young on the 2nd of July.

LANIUS EXCUBITOR. *Great Grey Shrike.*

Sparingly distributed, in fact so scattered as to be almost rare. We took one clutch of nine eggs, seven being the usual number. The nest was always plentifully lined, usually with white Willow-Grouse feathers; in the fir-region, however, at Ainettivaara, they were replaced by those of the Capercaillie.

HIRUNDO RUSTICA. *Swallow.*

We saw one example of this species on the 25th of May, but the bird is not known to the natives and it was therefore probably on migration. The Muonio Valley appears to be a migration-route to the warmer coasts of Norway, as we saw several birds on passage which certainly do not breed in the district.

CHELIDON URBICA. *Martin.*

Very common round the houses, where it is encouraged by the Finns, who nail up thin planks under the eaves to support the nests. It arrived on the 25th of May, when the river was still frozen and the land was covered with snow.

COTILE RIPARIA. *Sand-Martin.*

The northernmost colony of this species noticed was in 68° 25' N. lat., below Ainettivaara, where there was a cliff of sand above a bend of the river. The eggs were laid in the last week in June.

PASSER MONTANUS. *Tree-Sparrow.*

We saw five individuals of this species at Leveavuopio on the 28th of May, and one of them stayed for a few days, but disappeared early in June. We did not notice them breeding.

FRINGILLA MONTIFRINGILLA. *Brambling.*

The Brambling was very common in the birch-woods, both low down in the vicinity of the river and up the hills as far as the birch-growth extends. It arrived on the 24th of May and by the 26th was generally distributed. We found the first eggs on the 15th of June, but took fresh specimens late in July. Seven in a clutch were not uncommon. They vary greatly in size and type, and one of a clutch is often very much larger than the rest.

LINOTA LINARIA. *Mealy Redpoll.*

This species is common in the tall willow-scrub, and especially frequents islands in the lakes and rivers. It is a late breeder and we did not find eggs till the 18th of June.

PINICOLA ENUCLEATOR. *Pine-Grosbeak.*

We did not observe this species in the birch-region; it appeared to be confined to the fir-region, where it was fairly plentiful. Small flocks arrived at Ainettivaara on the 9th of May, and were all in pairs the next day. At this season the birds were very tame and we could approach so near as almost to catch them by the hand. The first egg

was found on the 12th of June; only in one case did we obtain a clutch of four, the usual number appearing to be three. The nests were placed in young firs about 4 or 5 feet from the ground.

EMBERIZA HORTULANA. *Ortolan.*

I observed and shot a single specimen at Ainettivaara on the 27th of April; it was singing on the roof of a barn in a snow-storm. This species seems to be very rare, but we obtained one nest on the 27th of June at Isosaari in 68° 40' N. lat., which is probably its extreme range on this river.

EMBERIZA SCIENICLUS. *Reed-Bunting.*

Fairly common throughout the district in the willow-scrub fringing the river. The Finns did not distinguish it from *Calcarius lapponicus*.

CALCARIUS LAPPONICUS. *Lapland Bunting.*

Very plentiful in the northern part of the district, but becoming scarce as the fir-region is approached. It arrived in large numbers at Leveavuopio on the 24th of May, when the birds were singing in the birches round the house. They prefer the cloudberry-moors, where the site of the nest is constantly betrayed by the male, who sits on a perch within a few yards of it uttering his metallic double call. The nest is always lined with feathers, though often sparingly. The eggs vary greatly both in size and colouring, one type being indistinguishable from one form of those of the Red-throated Pipit.

The female is very tame when sitting.

PLECTROPHENAX NIVALIS. *Snow-Bunting.*

I first saw Snow-Buntings in flocks on the Norwegian-Finnish Frontier on the 23rd of April. At that season they were found round the houses in company with Shore-Larks, picking up what they could from such small patches of ground as were bare of snow, but the two species always kept separate in the flocks. About the beginning of May the Buntings left the houses and went up into the hills: the last we saw of them there was on the 17th of May, but we could not find them breeding on the fells.

PERISOREUS INFAUSTUS. *Siberian Jay.*

Though plentiful in some years, these birds were scarce in the fir-region at the time of our visit and we only succeeded in finding three nests. By the 9th of May the eggs were hatched.

PICA RUSTICA. *Maggie.*

The northernmost limit of this species in the district appears to be 68° 40' N. lat., where we saw two pairs. The Maggie is not protected as in Norway, but is persecuted by the Finns on account of the damage that it does to the nests of the House-Martin, which is considered sacred.

CORVUS CORAX. *Raven.*

Sparsingly scattered throughout the district and breeding in suitable localities in the northern parts.

CORVUS CORNIX. *Hooded Crow.*

This species does not appear to breed north of the fir-region. I found one nest at Ainettivaara on the 6th of May, and saw some individuals in the northern districts; but we observed none breeding there, and the Finns declare that they nest only in fir-trees.

ALAUDA ARVENSIS. *Skyllark.*

On the 19th of May we saw one specimen, evidently on migration, sitting on the ice.

OTOCORYS ALPESTRIS. *Shore-Lark.*

This species was first seen in company with the Snow-Buntings round the houses at the end of April. As the snow melted, the birds moved up the lower hill-sides, nesting at an elevation of some 2000 feet, in the same localities as the Dotterel. Occasionally they breed lower, as does the Golden Plover, and we found a nest close to the river on the 15th of June with the eggs nearly hatched. This was, however, on a dry undulating moor covered with grey lichen and closely resembling the ground on the hill-tops. The nest is extremely difficult to find, as the parents give no indications of its whereabouts.

PICOIDES TRIDACTYLUS. *Three-toed Woodpecker.*

We saw only one Woodpecker during the whole of our stay, and obtained but one clutch of eggs. Yet we examined over five hundred nesting-holes, of which the bigger birch-woods were full. The Finns themselves were surprised at the scarcity of Woodpeckers, Tits, and Siberian Jays during the season, a fact which can only be accounted for by supposing that they are capricious in their local migrations.

CUCULUS CANORUS. *Cuckoo.*

Fairly common; it arrived at Leveavuopio on the 28th of May. Although we examined some hundreds of the smaller birds' nests, we were not successful in finding any eggs of the Cuckoo in them.

ASIO ACCIPITRINUS. *Short-eared Owl.*

Fairly plentiful and distributed evenly all along the river. It arrived at Ainettivaara on the 28th of April, and was to be seen every evening hawking above the frozen river or sitting motionless on a roof or post. At this season the cry resembled the barking of a dog, but as soon as the breeding-season began it changed to the extraordinary call "Poomp-poomp," from which the Finnish name "Pumpo-haukka" is derived. The males were then to be seen soaring and hovering in the air, occasionally stooping as a Snipe does when he drums, and at the same time making a loud snapping noise with the bill. We found the first eggs on the 6th of June. These were laid under a ling-bush in an open meadow not two hundred yards from the house at Ainettivaara.

NYCTEA SCANDIACA. *Snowy Owl.*

We saw only one of these birds, and, although in the preceding season they had been abundant, none bred on the fells at the time of our visit. Yet lemmings were then very plentiful, so that there was an abundant food-supply; the lemmings appear, however, to have been still more numerous the year before, so possibly the Snowy Owls anticipated a

dearth and shifted their quarters accordingly. A Lapp brought us in a clutch of eggs from Tuoiipala in Norway on the 20th of June.

CIRCUS CYANEUS. *Hen-Harrier.*

Sparingly distributed along the river. We saw a pair just below the 69th degree of latitude and found a nest in lat. 68° 45'. The birds arrived at Ainettivaara on the 14th of May.

BUTEO LAGOPUS. *Rough-legged Buzzard.*

Very common, especially in the mountain-districts. We found over forty nests. The birds had already arrived on the 23rd of April, and on the 25th I saw a pair building. This nest, the first that we observed, had four eggs on the 15th of May. Four appears to be the usual number, though three often composed the clutch and at times we found five. As nesting takes place when the ground is still covered with snow, it is possible to determine the likely sites from a distance of several miles; and once the cliffs are approached the birds betray the existence of the nest by flying round and screaming. The female is conspicuously larger than the male and her cry deeper and hoarser. The eggs were laid between the 15th and the 25th of May. The same breeding-place is occupied year after year, several old nests being often found close to the new. In one case I found the structure overthrown by an avalanche, the eggs lying unbroken in the snow beneath the cliff. The birds had constructed a second nest in the old spot, where the female was sitting on three eggs. The sites are usually fairly easy of access, except for the danger of slippery ice-slopes.

I took a clutch of five eggs from the same nest from which I had obtained a young bird in 1895. This bird is still alive and has laid eggs in captivity.

AQUILA CHRYSÆTUS. *Golden Eagle.*

We saw immature birds in June, and in April a pair began to nest near Leveavuopio, but were turned out by a pair of Rough-legged Buzzards. This species is very rare in the district.

ASTUR PALUMBARIUS. *Goshawk.*

A few pairs were found breeding round Ainettivaara, but they were much scattered. We obtained only two nests, the first eggs being laid on the 1st of May. The structure was very bulky, like that of a Sparrow-Hawk exaggerated, and the cup was neatly lined with green fir-shoots. The Finnish name means "Capercaillie-Hawk."

FALCO GYRFALCO. *Gyr-Falcon.*

This species is becoming very rare. The Helsingfors dealers offer four shillings apiece for the eggs, and in consequence the nests are robbed by the Finns wherever they are accessible. When eventually the birds take to a new breeding-place it is generally inaccessible, and they appear to be moving to the Norwegian side of the frontier, where the country is more mountainous. The first eggs were laid on the 24th of April.

FALCO ÆSALON. *Merlin.*

Fairly common, especially in the fir-region, where it nests exclusively in trees. We obtained seven nests, all built on firs, from the Ainettivaara district. The birds arrived on the 15th of May, and we took the first eggs on the 12th of June.

PANDION HALIAËTUS. *Osprey.*

The fir-woods at Ainettivaara are not large enough to afford suitable breeding-trees for this species, and it is consequently rare. We obtained one nest only, on the 25th of June. This species arrived on the 11th of May.

ANSER ERYTHROPUS. *Lesser White-fronted Goose.*

This Goose was very common on the river, breeding in the larger morasses of the birch-region. It arrived on the 23rd of May, and flocks were to be seen throughout the season—a large number of the birds appearing not to breed at all. We found the first of our nests on the 6th of June. They are always placed on small elevations in the bogs, which resemble miniature islands. The cry of this Goose is very high-pitched and shrill. When first disturbed the flocks always fly up within shot, apparently to inspect the intruder.

ANSER SEGETUM. *Bean-Goose.*

Plentiful on migration, arriving on the 11th of May. We could not, however, find the breeding-places and did not see any birds in June.

ANAS BOSCHAS. *Mallard.*

Rare, but we saw a few pairs just below the 69th degree of latitude, which were evidently breeding. It was first met with on the 13th of May. Like the Common Redshank, it seems to be confined to the head-waters of the river.

DAFILA ACUTA. *Pintail.*

Very common, and one of the earliest Ducks to appear (15th of May). It arrives paired, and is first seen sitting on the small patches of open water above and below the rapids. The nests are often situated some distance from the river. We found the first on the 9th of June, placed in a hummock in a wet swamp under some dwarf willow-bushes.

QUERQUEDULA CRECCA. *Teal.*

Fairly common, arriving on the 18th of May. Like the last-named species, the Teal often breeds at some distance from the water, and hence the nest is only to be found by beating. We obtained the first on the 21st of June.

MARECA PENELOPE. *Wigeon.*

Very common. It arrived on the 19th of May and bred in the neighbourhood of the river. The first eggs were found on the 7th of June.

FULIGULA CRISTATA. *Tufted Duck.*

Arrived on the 15th of May. It was fairly common, breeding in small ponds and inlets close to the river.

FULIGULA MARILA. *Scaup.*

Very common, breeding on small rocky islands. Many nests were washed out by the heavy floods which came down in the middle of June.

CLANGULA GLAUCION. *Golden-eye.*

Does not breed further north than the extreme limit of the fir-trees at Ainettivaara. Even there the trees are not of

sufficient size to afford nesting-holes, and the eggs are all laid in boxes put up for the birds' accommodation. We often saw them thirty or even forty miles more to the north, so that they would probably breed there if boxes were provided for them. The first clutch of eggs was found on the 10th of June.

HARELDA GLACIALIS. Long-tailed Duck.

Very common, arriving on the 25th of May; the first eggs were found on the 23rd of June, and flappers were seen on the 9th of July. It nests on the moors in the neighbourhood of small pools and tarns.

CEDEMIA NIGRA. Common Scoter.

Very common, arriving on the 20th of May. The first eggs were found on the 16th of June.

CEDEMIA FUSCA. Velvet Scoter.

Not so common as the preceding species, and less easy to locate in the breeding-season, as it retires to the fell lakes.

MERGUS MERGANSER. Goosander.

Fairly common on the river and the lakes adjoining it.

MERGUS SERRATOR. Red-breasted Merganser.

The commonest of the Duck family on the river. It especially frequents the rapids, and every island is tenanted by one or two pairs. The Finns take the eggs for food. It arrived on the 16th of May, and the first egg was found on the 5th of June.

TETRAO UROGALLUS. Capercaillie.

These birds were unusually scarce during our visit, and we found only one nest. In the winter they move out of the fir-region, and we saw them sixty miles north of Ainettivaara. At this season they are very silent and difficult of approach, the noise of the "ski" warning them. As soon as the "play" begins, however, they may be heard miles away.

LAGOPUS ALBUS. Willow-Grouse.

Common, but steadily decreasing in numbers owing to persecution. The Finns carry on a great trade in these birds in winter by snaring and shooting them, and then

taking them over to the markets in Norway, where they fetch on an average sixpence apiece. By imitating the hoarse crow of the male or the mewling note of the female, the natives manage to creep within a few yards, and the cheap Belgian breech-loader does the rest. On warm days in the snow these birds are very tame, becoming wild with the approach of harder weather. When sitting the female is often very confiding, and we took a photograph within three feet of one without any screen.

LAGOPUS MUTUS. *Ptarmigan.*

Not common, but a few pairs are to be seen on every high fell-top. Mr. Stares secured photographs of a sitting hen, which allowed him to stroke her on the nest.

FULICA ATRA. *Coot.*

I saw a stuffed specimen in a house on the Norwegian side in lat. 69° 20' N. which the owner had shot there.

GRUS COMMUNIS. *Crane.*

Muonioniska still appears to be the northernmost breeding-limit of this species, as in John Wolley's day. It is, however, occasionally seen up the valley on migration, and one was shot at Koski-saari on the 7th of June.

EUDROMIAS MORINELLUS. *Dotterel.*

Fairly common in the mountain-districts, preferring flat-topped hills with an elevation of 2000 feet or more. The nests found were all in the vicinity of water, on flat moss-covered uplands interspersed with small pools formed by the melting snow. The birds were very confiding and would run about within a few feet of us: we succeeded in obtaining several photographs at a distance of only three feet. They sit very closely and the nest is only to be found by stumbling on it, unless the female is off the eggs, when she may be easily watched on.

ÆGIALITIS HIATICOLA. *Ringed Plover.*

Fairly common on the edges of such lakes as have spits of sand by them. It arrived on May 27th in company with Dunlins, Temminck's Stints, and Little Stints. Eggs were found on the 30th of June on the point of being hatched.

CHARADRIUS PLUVIALIS. *Golden Plover.*

These birds arrived on the 14th of May. At first they frequented the moors in the neighbourhood of the river, and even after they had retired up the hill-sides to nest they came down daily to feed, puzzling us considerably for some time. Occasionally a pair bred low down, as in the case of the Shore-Lark. We found the first nest on the 7th of June. The females sit very closely, but if off the eggs are easily watched on. As soon as they have young they bring them down to the lower grounds.

VANELLUS VULGARIS. *Lapwing.*

Very rare and unknown to the Finns generally. I obtained one clutch of eggs, however, from 68° 25' N. lat., which were brought in by a Finn, who accurately described the bird and thought it a great rarity.

PHALAROPUS HYPERBOREUS. *Red-necked Phalarope.*

This species was very common, and arrived on the 2nd of June; we found the first eggs on the 21st of June. The parents generally betray the presence of the nest by swimming about excitedly while uttering their sharp "tirr-tirr." The Finnish name is "Water-Swallow."

GALLINAGO CŒLESTIS. *Common Snipe.*

Common on the upper reaches of the river, where the birds were to be heard drumming throughout the spring. They arrived on the 24th of May.

GALLINAGO GALLINULA. *Jack-Snipe.*

I saw only one example of this species and was unsuccessful in finding the nest, which, however, I had obtained in the same district in 1895.

TRINGA ALPINA. *Dunlin.*

Does not breed in the district. We saw flocks on migration at the end of May.

TRINGA MINUTA. *Little Stint.*

We saw flocks on migration in company with Ringed Plovers, Dunlins, and Temminck's Stints.

TRINGA TEMMINCKI. *Temminck's Stint.*

Common. Arrived on May 25th. We found the first egg on June 18th. The favourite breeding-places were grass-meadows, especially those on islands, and a great many nests were washed out by the heavy floods. The parents were very noisy at the nest, flying round and round and soaring in the air while uttering their chirruping breeding-song.

MACHETES PUGNAX. *Ruff.*

Common. Many arrived on the 25th of May and immediately started "hilling." They were still "hilling" on the 19th of June. A great number of nests were swamped by the floods. We found the first eggs on the 13th of June.

TRINGOIDES HYPOLEUCUS. *Common Sandpiper.*

Very abundant throughout the district, where it arrived on the 27th of May, the first eggs being found on the 16th of June. Occasionally it breeds at some distance from the water, and Mr. Stares found a nest quite half a mile away from the nearest lake on the slopes of a low birch-clad hill. In this case one of the birds flew off the nest, but they were usually very wary and left long before we approached. They prefer islands, and the nest is usually under the shelter of a stump or branch.

TOTANUS GLAREOLA. *Wood-Sandpiper.*

Very common. It arrived on the 25th of May, and the first eggs were found on the 16th of June. This species is very noticeable in the nesting-season, owing to its breeding-note "leero-leero-leero," uttered as it soars on the wing. The Finnish name is "Leero." The eggs are only to be found by stumbling on them. I obtained one clutch from the old nest of a Great Grey Shrike placed in the fork of a birch some twenty feet from the ground; this bears out the observations made by Mr. H. L. Popham on the Yenisei.

TOTANUS CALIDRIS. *Redshank.*

Rare. There were a few individuals, however, at the head of the river, where we found one nest.

TOTANUS FUSCUS. *Spotted Redshank.*

The breeding-range of this species does not appear to extend far above the limit of the fir-region. We found none in the upper parts of the district, but about Ainettivaara it was numerous in the bogs. John Wolley found it nesting away from the marshes, but we found it always in them. In one case I flushed a male from the nest, and a Finn who was with me once knocked down a male as it swooped near him with its breast almost denuded of feathers. This seems to point to the fact that the male commonly incubates. The birds are very wary and when disturbed at their feeding-grounds behave exactly as if they had eggs. Hence it is impossible to tell the whereabouts of the nest from their actions, and it is only to be found by stumbling on it. It is a mere scrape in a hummock on a cloudberry-bog. The first eggs were found on the 9th of June.

TOTANUS CANESCENS. *Greenshank.*

This species is very common and is one of the characteristic birds of the Lapland summer, its cry "*vikla-vikla-vikla*" (whence the Finnish name "*Vikla*") being heard day and night. As in the case of the preceding species, the nest is to be found only by luck, and in this case the difficulty is accentuated by the fact that the Greenshank does not breed on the lower grounds but on the birch-clad hills. It arrived on the 23rd of May, the first eggs being found on the 10th of June.

NUMENIUS PHÆOPUS. *Whimbrel.*

Numerous, especially in the lower mountain-districts immediately north of the fir-region. At the head of the river there were none. It breeds on dry moors fairly close to the river. Unless the breeding-grounds have been much disturbed it is easily watched to the nest. The first eggs were found on the 6th of June.

STERNA MACRURA. *Arctic Tern.*

Fairly common, though not so plentiful as in 1895. It frequents the shallower lakes and breeds in scattered pairs on the islands. It arrived on the 25th of May,

STERCORARIUS PARASITICUS. *Buffon's Skua.*

This species was very plentiful during the time of our visit, and we were enabled to examine a large series of its eggs. The usual breeding-places are in the higher fell-morasses, though occasionally it nests close to the river—never, of course, in the fir-region. The principal food seems to be decayed lemmings; it appears to prefer them in this state, as we found "larders" of lemmings in various stages of decomposition round the nests, and the birds when skinned gave out a most offensive smell. They betray their nests by flying round and hovering like Kestrels while uttering their chough-like cry "*jeou-jeou.*" The Finnish name is "*Kihu.*" Occasionally the eggs are of a beautiful sky-blue ground-colour without spots.

LARUS ARGENTATUS. *Herring-Gull.*

We saw a few on migration in May.

LARUS GLAUCUS. *Glaucous Gull.*

We saw one on migration in May.

COLYMBUS SEPTENTRIONALIS. *Red-throated Diver.*

Fairly common, especially on the higher lakes towards the frontier of Norway.

COLYMBUS ARCTICUS. *Black-throated Diver.*

Fairly common.

IV.—*Remarks on Schaeffer's 'Museum Ornithologicum'**.

By P. L. SCLATER, D.Sc., F.R.S.

IN the last number of this Journal ('Ibis,' 1904, p. 550) Dr. Hartert stated his opinion that the generic terms proposed by Schaeffer in his 'Museum Ornithologicum,' published in 1789, "are not admissible," because the author "did not use binomial nomenclature." I do not quite agree with Dr. Hartert on this subject, and I trust that he will excuse me if I explain my reasons for taking a different view.

* 'Museum Ornithologicum, exhibens enumerationem et descriptionem Avium, quas novâ prorsus ratione sibi paratas in Museo suo asservat Diacobus Christianus Schaeffer.' Ratisbonæ, 1789.